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FRICTION SURFACE

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This invention relates to a friction surface and is particularly adaptable to the covering for the take-up roll of a loom.

The take-up roll of a loom takes the cloth after it is woven and draws it through the loom to keep the proper tension on the warp threads. Heretofore, sand paper covered rolls have been commonly used for this purpose, or rolls which have been made of sheet metal punctured to have outstanding protrusions somewhat similar to an ordinary nutmeg grater. These rolls have been objectionable in that they have a tendency to roughen fine goods and pull up the threads. Further difficulties are encountered in the use of these metal rolls, roughened as indicated, in that provision must be made to change the roll for different qualities and weights of cloths, because one sheet metal roll may be too rough for a finer quality of cloth, although it may be usable on heavier goods.

I provide a frictional surface, applicable to such rolls, which will give the proper grip on the cloth, and which will be applicable to the finer goods without danger of roughening the goods or pulling up the threads. I obtain improved frictional qualities combined with smoothness of operation by the use of a cork surface which has been indented to form an irregular or bumpy surface.

In the accompanying drawings illustrating the present preferred embodiment of the invention,—

Figure 1 is a side elevation of a loom take-up roll embodying my invention;

Figure 2 is a top plan view of the cork friction strip employed;

Figure 3 is a side elevation of the strip shown in Figure 2;

Figure 4 is a sectional view on the line IV—IV of Figure 2; and

Figure 5 is a cross section on the line V—V of Figure 2.

Referring to the illustrated embodiment, Figure 1 shows a roll 2 having a friction surface strip 3 made according to my invention wound helically thereon, the strip 3 being cemented to the roll 2 by any suitable adhesive. The strip 3 is preferably made comparatively narrow, so that its inner surface 4 may be made to conform quite closely to the surface of the roll 2. In practice a width of about two inches has been found to be satisfactory, but this width may be varied as desired depending upon the diameter of the roll 2, ease of application and convenience of manufacture of the strip.

As shown in Fig. 2, the frictional surface is preferably formed by a strip of cork having a regular, undulatory surface from which ridges have been cut at spaced intervals. The strip of cork is of indeterminate length, and is cut from a block of compressed artificial cork so that the planes of compression of the cork granules are at an angle, preferably normal, to the surface.

The artificial cork is composed of granulated cork pressed and held in a solid resilient mass by means of an elastic binder. Any of the usual formulæ for making artificial cork may be followed but preferably that of the Busch Patent 1,532,682 of April 7, 1925. The strip is cut from a block of artificial cork so that the flattened granules are normal to the flat surface of the cut strip as described in said Busch Patent 1,532,682. While the cork strip may be otherwise cut, it is of advantage to have the pressed flattened cork granules disposed edgewise to the working surface, as this arrangement of the granules gives better wear resisting qualities to the surface as more fully described in said Busch patent. The strip 3 thus formed is then cut to form a plurality of parallel ridges 5 extending longitudinally on the strip and being spaced substantially equidistant across the strip. The ridges are then cut away at spaced intervals to form notches 6, thereby forming substantially regularly spaced projections 7. It will be understood that the regularity of spacing of the projections 7 presents a method of making the surface whereby a large number of projections are obtained on a relatively small area by a simplified process of manufacture.

The number of projections the surface is of more importance than the particular geometrical arrangement employed.

As shown in Figures 3 and 5, valleys 8 be-